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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/556,821	04/21/2000	Yukio Sugita	Q58959	6402

7590 07/18/2003

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EXAMINER	
GHULAMALI, QUTBUDDIN	
ART UNIT	**PAPER NUMBER**
2631	5

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/556,821	SUGITA, YUKIO	
	Examiner	Art Unit	
	Qutub Ghulamali	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. This Office Action is responsive to the Amendment filed on 6/11/03.

2. Applicant's arguments with respect to claims 1-4, 6, 11-20 have been considered but are moot in view of the new ground(s) of rejection.

The rejection is as follows:

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 11-14, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Mutoh (US Patent No. 5,940,101 new art);

Mutoh teaches a clock generation device for generating a first clock signal CLK, an operation device CG which operates the first clock signal and generates at least one processing clock whose phase is different than a phase of the first clock with the excitation signal PCLK of the phase θ selected by the multiplexer MP, a pulse width modulator PM for converting the image data into a pulse width signal corresponding to a density gradation, a synchronizing circuit SC for synchronizing a rising or falling edge of the output of the pulse width modulator PM with the rising or falling edge of the excitation signal PCLK from the frequency divider FD, and a

high voltage switch (selector) for amplifying and applying the output of the synchronizing circuit SC to the control electrode 4, the delayed pulse generator DG receives the excitation signal PCLK and the reference clock signal CLK as input data and an input shift clock signal, respectively, and plurality of outputs N pulse trains, having a period of the excitation signal PCLK successively delayed by $2\pi/N$ (col. 1, lines 15-63, col. 11, lines 40-60).

5. Claims 7, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Woodworth (US Patent No. 5,991,041 new art);

Woodworth teaches the line scan camera 70, 72 used in the preferred embodiment receives a Master Clock (MCLK) signal and a Line Transfer (LT) signal, as shown in FIG. 9. The master clock is derived from a crystal oscillator, which also feeds the TCR2 input to the TPU. The line transfer signals are generated using the SPWM functions of the TPU referenced to TC2, a light source for exposure, which emits light in accordance with a pulse width of respective pulses. Woodworth therefore teaches the claim recitation. (see col. 6, lines 31-44; col. 8, lines 56-65; col. 10, lines 59-67).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5, 6, 15, 16, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutoh (US Patent No. 5,940,101 new art) in view of Mutoh (US Patent No. 5,583,552 new art).

As applied to claims 5, 6, 15, 16, and 22 above, Mutoh teaches every feature of the claimed invention, but does not explicitly teach said operation device is an inverting device which inverts the first clock signal and generates a second clock signal. In the same field of endeavor, Mutoch (US Patent 5,583,552) teaches (fig. 3), the start position delay circuit SD is constructed, for example, from a preset decrementing counter 31, a delay type flip-flop 32, an invertor 33 and an AND gate 34. In the start position delay circuit SD, the preset decrementing counter 31 is loaded with start position delay data, which increase in proportion to a delay time, in response to a shaft encoder output (origin pulse) and is decremented in response to a registration adjusting clock signal SCLK as seen from fig. 4. When the count value of the present decrementing counter 31 is decremented finally to "ALL ZERO", a rising signal GATEPULSE is produced by the delay type flip-flop 32. Such rising signal GATEPULSE and the registration adjusting clock SCLK are ANDed by the AND gate 34 to obtain a registration adjusting clock SCLK. Referring now to fig. 5, the synchronizing circuit SC is constructed, for example, from a pair of delay type flip-flops 41 and 42. In the synchronizing circuit SC, a picture element recording clock DCLK is produced which has rising and falling edges synchronized with rising edges of a registration adjusting clock SCLK and an exciting clock PCLK, respectively, as seen from fig. 6 (col. 13, lines 40-58; col. 17, lines 10-24, lines 59-62; col. 18, lines 55-57).

8. Similarly, claims 8-10, 18-20, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodworth (US Patent No. 5,991,041 new art) in view of Mutoh (US Patent No. 5,583,552 new art);

Woodworth teaches every feature of the claimed invention, but does not explicitly teach said operation device is an inverting device, which inverts the first clock signal and generates a second clock signal. In the same field of endeavor, Mutoch (US Patent 5,583,552) teaches (fig. 3), the start position delay circuit SD is constructed, for example, from a preset decrementing counter 31, a delay type flip-flop 32, an invertor 33 and an AND gate 34. In the start position delay circuit SD, the preset decrementing counter 31 is loaded with start position delay data, which increase in proportion to a delay time, in response to a shaft encoder output (origin pulse) and is decremented in response to a registration adjusting clock signal SCLK as seen from fig. 4. When the count value of the present decrementing counter 31 is decremented finally to "ALL ZERO", a rising signal GATEPULSE is produced by the delay type flip-flop 32. Such rising signal GATEPULSE and the registration adjusting clock SCLK are ANDed by the AND gate 34 to obtain a registration adjusting clock SCLK. Referring now to fig. 5, the synchronizing circuit SC is constructed, for example, from a pair of delay type flip-flops 41 and 42. In the synchronizing circuit SC, a picture element recording clock DCLK is produced which has rising and falling edges synchronized with rising edges of a registration adjusting clock SCLK and an exciting clock PCLK, respectively, as seen from fig. 6 (col. 13, lines 40-58; col. 17, lines 10-24, lines 59-62; col. 18, lines 55-57).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (703) 305-7868. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4750.

QG.
July 14, 2003

DON N. VO
PRIMARY EXAMINER